

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claims 1 and 2 (Canceled)

3. (Previously Presented): The process according to Claim 12, wherein said hydrocarbons other than methane are present, with respect to the methane, in a proportion on the order of a few percent.

4. (Previously Presented): The process according to Claim 3, wherein said hydrocarbons other than methane are present, with respect to the methane, in a proportion of less than 6%.

5. (Previously Presented): The process according to Claim 3, wherein said gas comprises less than 50 ppm of methane.

6. (Previously Presented): The process according to Claim 3, wherein said hydrocarbons other than methane are present at a concentration of less than 5 ppm in the oxygen.

7. (Previously Presented): The process according to Claim 12, wherein hydrocarbons other than methane are incinerated using a catalyst.

8. (Currently Amended): The process according to Claim ~~[[7]]~~ 12, wherein the detection is carried out by a flame ionization detector.

9. (Canceled)

10. (Previously Presented): The process according to Claim 7, wherein the temperature of the catalyst is such that less than 5% of the methane present in the gas is incinerated.

11. (Previously Presented): The process according to Claim 10, wherein the temperature of the catalyst is between 160°C and 190°C.

12. (Currently Amended): A process for the detection of hydrocarbons other than methane in a liquid oxygen bath of an evaporator of a unit for the production of gases from the air, comprising the steps of:

- (1) withdrawing a ~~withdrawal of~~ a sample of liquid oxygen from the said bath,
- (2) evaporating an ~~evaporation of the~~ said liquid oxygen, thereby producing an evaporated gas comprising at least 95% oxygen, and containing methane and ~~said~~ hydrocarbons other than methane, and

- (3) detecting the level ~~the detection~~ of hydrocarbons other than methane in the said evaporated gas, said detection comprising the following stages:

(a) adding hydrogen to said evaporated gas to provide a hydrogen/oxygen ratio between 10% and 40%,

(b) measuring a ~~stage of detection of the level of~~ combined hydrocarbons in said gas, providing a first value for the combined hydrocarbons,

(c) incinerating ~~a stage of combustion~~ of the hydrocarbons other than methane in said gas,

(d) measuring the level ~~a stage of detection~~ of methane in said gas, providing a second value, and

(e) calculating ~~a stage of calculation~~ of the amount of hydrocarbons other than methane by the difference between the first value and the second value.

13. (Previously Presented): The process according to Claim 12, wherein the withdrawal of the sample is carried out using a pipe of a pump for raising liquid or a sampler of a lift type.

14. (Previously Presented): The process according to Claim 12, additionally comprising a stage of triggering an alarm when the concentration or the level of hydrocarbons other than methane in the said evaporated gas exceeds a certain limit value.

15. (Canceled)

16. (Previously Presented): The device according to Claim 18, wherein the means for the combustion of the hydrocarbons other than methane comprises a catalyst.

17. (Previously Presented): The device according to Claim 18, wherein the means for the detection of the combined hydrocarbons and the means for the detection of methane comprises a flame ionization detector.

18. (Currently Amended): A device for the detection of hydrocarbons other than methane in a liquid oxygen bath of an evaporator of a unit for the manufacture of gases from the air, comprising:

- means for the withdrawal of a sample of liquid oxygen from the said bath,
- means for the evaporation of said liquid oxygen, producing an evaporated gas,
- means for introducing hydrogen into said evaporated gas,
- means for the detection of combined hydrocarbons in said gas, providing a first value for combined hydrocarbons,
- means for combustion of hydrocarbons other than methane,
- means for the detection of methane, providing a second value,
- means for calculation of the amount of hydrocarbons other than methane by the difference between the first value and the second value, and
- means for triggering an alarm when the concentration or the level of hydrocarbons other than methane in said evaporated gas exceeds a certain limit value.

19. (Canceled)

20. (Previously Presented): The process according to Claim 12, said gas comprising at least 99% oxygen.

21. (Previously Presented): The process according to Claim 12, said gas comprising at least 99.5% oxygen.

22. (Previously Presented): The process according to Claim 4, wherein said hydrocarbons other than methane are present, with respect to the methane, in a proportion of less than 5%.

23. (Previously Presented): The process according to Claim 4, wherein said hydrocarbons other than methane are present, with respect to the methane, in a proportion of less than 4%.

24. (Previously Presented): The process according to Claim 4, wherein said hydrocarbons other than methane are present, with respect to the methane, in a proportion of less than 3%.

25. (Canceled)

26. (Previously Presented): The process according to Claim 8, wherein the temperature of the catalyst is such that less than 5% of the methane present in the gas is incinerated.

27. (Currently Amended): A process for the detection of hydrocarbons other than methane in a liquid oxygen bath of an evaporator of a unit for the production of gases from the air, comprising:

- ~~a withdrawal of~~ withdrawing a sample of liquid oxygen from the said bath,
- ~~an evaporation of the~~ evaporating said liquid oxygen, producing an evaporated gas,
- ~~a process for the detection~~ detecting the level of hydrocarbons other than methane in the said evaporated gas, according to Claim ~~[[3]]~~ 8.

28. (Previously Presented): A device for the detection of hydrocarbons other than methane in a liquid oxygen bath of an evaporator of a unit for the manufacture of gases from the air, comprising:

- means for the withdrawal of a sample of liquid oxygen from the said bath,
 - means for the evaporation of the said liquid oxygen, producing an evaporated gas,
- and
- a detection device according to Claim 16.

29. (Previously Presented): A device for the detection of hydrocarbons other than methane in a liquid oxygen bath of an evaporator of a unit for the manufacture of gases from the air, comprising:

- means for the withdrawal of a sample of liquid oxygen from the said bath,
 - means for the evaporation of the said liquid oxygen, producing an evaporated gas,
- and
- a detection device according to Claim 17.

30. (Canceled)

31. (New): A device for the detection of hydrocarbons other than methane in a liquid oxygen bath of an evaporator of a unit for the manufacture of gases from the air, comprising:

- means for the withdrawal of a sample of liquid oxygen from the bath,
- means for the evaporation of said liquid oxygen, producing an evaporated gas,
- means for introducing hydrogen into said evaporated gas,

means for the detection of combined hydrocarbons in said gas, providing a first value for combined hydrocarbons,

catalyst means for combustion of the hydrocarbons other than methane,

means for the detection of methane, providing a second value,

means for calculation of the amount of hydrocarbons other than methane by the difference between the first value and the second value,

means for triggering an alarm when the concentration or the level of hydrocarbons other than methane in said evaporated gas exceeds a certain limit value, and

wherein the means for the detection of the combined hydrocarbons and the means for the detection of methane comprises a flame ionization detector.